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5412

2 September 1964

MEMORANDUM FOR THE RECORD

SUBJECT: Evaluation of Kalvar Film and Viewer

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1. On 28 August, I visited the [REDACTED] demonstrated Virginia to inspect a Kalvar Viewer. [REDACTED] STATOTHR the instrument since [REDACTED] was in the hospital.

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2. The Kalvar Viewer permits Kalvar film to be rear projected to a built in screen. It is a prototype model for demonstration purposes only. The viewer measures approximately  $1\frac{1}{2}' \times 1\frac{1}{2}' \times 1'$ , has a screen  $9" \times 9"$ , accommodates film chips  $2\frac{1}{4}" \times 2\frac{1}{4}"$  and magnifies 4X.

3. A slide projector, centrally located in the viewer, uses a 150 watt incandescent bulb to project a positive image to the screen by transmission. In addition, the viewer is equipped with two projectors, each mounted at an oblique angle to the front of the film. These projectors, equipped with 300 watt bulbs, are used only to illuminate the image on the surface of the Kalvar film. By switching off the centrally located projector, it is possible to reflect the illuminated image to the screen in the same manner as is accomplished with an opaque projector. Therefore, the viewer can project either a positive or negative image from the same film chips.

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4. [REDACTED] informed me that the Surgeon General's office is very interested in such a viewer and that the Kalvar Corporation will be designing and manufacturing three viewers for that office. They will be used to develop a new technique of reading X-ray photos by switching alternately from positive to negative images.

5. I also attended a demonstration of a breadboard model of a roll to roll printer developed by the [REDACTED]. It uses a gaseous discharge lamp which was developed by [REDACTED] two years ago. It provides a pulsed light source suitable for Kalvar exposures. The

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GROUP 1  
Excluded from automatic  
downgrading and  
declassification

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█████ representative, ██████████, stated that after eleven months intermittent use of the pulsed source, sometimes once a day and sometimes many hundreds of flashes in a day, no apparent decrease in intensity is observed.

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6. The ██████ lamp will be brought to the attention of Eastman Kodak for possible investigation as a light source for a Rapid Access Printer. However, I don't think that the ██████ lamp is available for general use. STATOTHR

7. The chief shortcoming of the Kalvar system lies in the inherent short density range. The present system cannot accommodate aerial negatives having very long tonal range and cannot print through silver negative densities greater than 1.3.

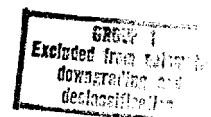
8. Kalvar film does not have the versatility required for use in a Rapid Access Printer since it produces a negative image from a positive. It has greater possibility for use as a duplicating medium for line rather than continuous tone chips.

9. After checking with several operational units in the Center and relaying information on Kalvar, I was informed by ██████████ that PID may be able to use Kalvar reproduction with line work. He will be making arrangements to see a demonstration of the material in the local office of Kalvar. STATOTHR

25X1A

████████████████████  
Development Branch, P & DS

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DATE REQUESTED BY 6 August 1964	DATE RECEIVED BY 7 August 1964	DATE APPROVED BY <i>Wm 7 Aug</i> 5412
ASSIGNED TO [REDACTED]	DATE ASSIGNED BY 6 Aug 64 by R.Y.N.	DUE DATE 28 Aug 64
PROJECT ACTION	DUE DATE	DATE COMPL % COMPL

SUBJECT: Kalvar materials and viewer evaluation.  
25X1A

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REFERENCE: Conference between [REDACTED] and [REDACTED]  
(Kalvar) of 4 Aug. 1964.

1. This assignment is an extension of the memorandum instructing your assistance to [REDACTED] 25X1A
2. By reference, [REDACTED] was shown the latest Kalvar materials and viewer. 25X1A
3. A thorough evaluation of the material as a possible contact duplicating medium for line and/or continuous tone chips is required.
4. An evaluation of the viewer is also desired.
5. Prepare Memorandum for The Record evaluation report.

CONTRACTOR		CONTRACT NO	TYPE
CONSIGNEE		CLASSIFICATION	TOTAL COST
PRJ	STAFF STUDY COMPLETED	SENT TO TDC	TDC ACTION
EX DIR APPROVAL 25X1A	CONTRACT DATE	ESTIMATED COMPLETION 15 SEP 64	COMPLETION DATE
MONITOR 5412	PROJECT TITLE Kalvar materials and viewer evaluation.		• Minor NPIC FM-204 (1-64)